

## WHAT IS CLAIMED IS:

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1. A method for transmitting a short message to a plurality of subscribers in a mobile communication system, comprising the steps of:

5 registering a plurality of called subscriber numbers in a short message service center of said mobile communication system by associating each of said plurality of called subscriber numbers with a group identifier; and  
simultaneously transmitting said short message to each of said plurality of called subscriber numbers by designating said group identifier.

10 2. In a mobile communication system having a plurality of base station subsystems for demodulating signals received from a plurality of corresponding mobile communication terminals and a mobile switching center, operatively connected to said plurality of base station subsystems, for detecting a short message service center number from said demodulated signals and for switching to a corresponding short message service center through a gateway, said short  
15 message service center having a memory, a method for transmitting a short message to a plurality of subscribers, comprising the steps of:

transmitting short message information from one of said mobile communication terminals, said short message information including a group identifier and a short message;

detecting, by said short message service center, said group identifier from said short message information; and  
simultaneously transmitting said short message to subscriber numbers associated with said detected group identifier.

5                    3.     The method of claim 2, wherein said step of transmitting said short message information from said mobile communication terminal includes the steps of:

10                   displaying a plurality of menus;  
                     selecting a short message service menu from said plurality of displayed menus;

15                   displaying a first set of sub-menus associated with said short message service menu, said first set of sub-menus including a short message transmission mode and a short message group registration mode sub-menu;

                     instructing a calling subscriber to input a short message service center number in response to selecting said short message transmission mode sub-menu;

                     displaying a second set of sub-menus associated with said short message transmission mode, said second set of sub-menus including a group transmission mode and a normal transmission mode sub-menu;

20                   inputting said group identifier and said short message if said group transmission mode is selected; and

transmitting a short message signal including said short message service center number, said group identifier and said short message.

4. The method of claim 3, wherein said short message signal is transmitted by actuating a transmit key of said mobile communication terminal.

5. The method of claim 3, wherein said step of inputting said group identifier and said short message includes the substeps of:

instructing a calling subscriber to input said group identifier;

determining if said group identifier is input;

storing said input group identifier in a memory of said mobile communication terminal;

instructing said calling subscriber to input said short message;

determining if a short message end signal is input; and

storing said short message in said memory of said mobile communication terminal if said short message end signal is input.

6. The method of claim 3, wherein said plurality of menus are displayed by actuating a menu key of said mobile communication terminal.

7. The method of claim 2, wherein said step of detecting said group identifier from said short message information includes the substeps of:

determining if said short message information is received;

determining if said short message information is a group transmission mode or a normal short message mode when said short message information is received;

detecting said short message from said short message information and storing said short message if said short message information is a group transmission mode; and

detecting said group identifier from said short message information.

8. The method of claim 2, wherein said step of simultaneously transmitting said short message includes the substeps of:

determining if said detected group identifier exists in said memory of said short message service center;

reading from said memory subscriber numbers corresponding to said detected group identifier if the detected group identifier exists in said memory; and

dialing said subscriber numbers read from said memory to transmit said short message thereto.

545 A2

9. A method for transmitting a short message to a plurality of subscribers in a mobile communication system, comprising the steps of:

transmitting from a mobile communication terminal a short message registration signal including a short message service center number, a group identifier and at least one subscriber number;

detecting, by a short message service center, said group identifier from said short message registration signal; and

registering said transmitted subscriber numbers in said short message service center in accordance with said detected group identifier.

10. The method of claim 9, wherein said step of transmitting said short message registration signal comprises the steps of:

displaying a plurality of menus;

selecting a short message service menu from said plurality of displayed menus;

displaying a first set of sub-menus associated with said short message service menu, said first set of sub-menus including a short message transmission mode and a short message group registration mode;

instructing a calling subscriber to input a short message service center number in response to selecting said short message group registration mode sub-menu;

inputting said group identifier and said subscriber numbers; and

678-154 (P8378-US/STN)

543 B1

transmitting said short message signal including said short message service center number, said group identifier and said subscriber numbers.

11. The method of claim 10, wherein said step of inputting said subscriber numbers includes the steps of:

inputting a desired subscriber number;

determining if a subscriber number end key is actuated; and

instructing a caller to input another desired subscriber number if said subscriber number end key is not actuated.

12. The method of claim 11, wherein said step of transmitting said short message signal includes the steps of:

determining if a transmit key is actuated when said subscriber number end key is actuated; and

transmitting said short message signal upon actuation of said transmit key.

13. The method of claim 9, further comprising the step of storing said detected group identifier from said short message registration signal.

14. The method of claim 9, wherein said step of registering said transmitted subscriber numbers comprises the steps of:

- detecting said transmitted subscriber numbers;
- assigning a plurality of addresses corresponding to the detected group identifier; and
- storing each of said subscriber numbers in a corresponding one of said assigned addresses.

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